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MARK D. SARALINO (GENERAL)
RENNER, OTTO, BOISSELLE & SKLAR, LLP
1621 EUCLID AVENUE, NINETEENTH FLOOR
CLEVELAND, OH 44115-2191

EXAMINER	
WATSON, JOY L	

ART UNIT	PAPER NUMBER
1762	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/824,023	NISHIO ET AL.	
	Examiner	Art Unit	
	Joy Watson	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5-8 and 10-14* is/are pending in the application.

4a) Of the above claim(s) *2, 4 and 9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5-8 and 10-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment dated August 29, 2007 is acknowledged. Claims 1, 3 and 8 are amended. Claims 2, 4 and 9 stand withdrawn from consideration. Claims 1, 3, 6-8, 10-14 are examined on the merits.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trotterdell (EP '0028067, hereafter '067) and Ohsugi et al. (US Patent 4,955,213 known hereafter as '213).

Claim 1

'067 teaches:
A washing machine, including a drum (3) having an axis of rotation in a direction crossing a vertical direction and a water tank (2) surrounding said drum (p. 3 lines 25-30) comprising: a water level detecting unit detecting level of water in said water tank (p. 2 lines 12-29); a water feed unit (5) for feeding water to said water tank (p. 3 lines 33-34); and a control portion operating said washing machine for washing (p. 4 lines 6-9); it does not teach that the control portion detects the water level for a prescribed time period and thereafter turns off the power supply. '213 teaches a pressure switch which

detects a water level in a washing tub (col. 3 lines 62-64) and a power source switch that is in the off condition after about five minutes from the finish of all washing processes (col. 6 lines 5-10) in order to conserve energy. At the time of the invention to one of ordinary skill in the art would have been motivated to program the control portion of '067 to switch the power source of '213 to the "off" position in order to conserve energy while the machine was not in use. A prescribed "time period set in accordance with a time period calculated from a minimum flow rate of water fed from said water feed unit and a smallest amount of water detectable by said water level detecting unit" is not required to be calculated by the controller. The time period could be entered manually and therefore not a feature of the apparatus nor does it further limit the apparatus claim. The time period is a feature of the use of the apparatus.

Claim 3

Claim 3 is rejected as taught in Claim 1 and in further view of '067 which additionally teaches a washing machine, including a drum having an axis of rotation in a direction crossing a vertical direction and a water tank surrounding said drum (p. 3 lines 25-30); wherein said water tank has an opening in a plane crossing said axis of rotation; said washing machine comprising: a door opening and closing said opening of said water tank (only figure, item number 4; p. 3 lines 31); a water feed unit for feeding water to said water tank (p. 3 line 33); a water leakage detecting unit monitoring water leakage at said water feed unit and detecting the water level in said water tank (p. 2 lines 12-29, p. 3 lines 12-16, by applicants admission on page 5 lines 20-28 of the Specification the

water leakage detecting unit can include the "sensor providing a signal indicative of level of liquid in the tub); and a control portion operating said washing machine for washing; wherein when said operation for washing is completed, said control portion causes said leakage detecting unit to monitor water leakage at said water feed unit only for a prescribed time period, and thereafter power supply to said control portion is turned off which not taught by '067, but rendered obvious by '213 for the same reasons as Claim 1.

2. Claims 5, 8 and10 are rejected under 35 U.S.C. 103(a) as being unpatentable over '067 and '213 and in further view of Dirnberger et al. (US Patent 6,840,553 known hereafter as '553).

Claim 5

'067 and '213 teach the features of Claim 3, a level sensor and transmitter, and '067 further teaches that flooding can occur because of a washing machine malfunction (p. 2 lines 1-10). It does not teach

> a lock unit for preventing opening of said door;
>
> wherein said control portion causes said lock unit to lock said door when said leakage detecting unit detects water leakage at said water feed unit.

But '553 teaches a lock for preventing opening of a washing machine door and a controller to control the lock when opening the door would cause water to escape (col. 4

lines 48-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have added the lock and controller of '553 to the washing machine of '067 to have prevented flooding. In such a system it would have been obvious to one of ordinary skill in the art at the time of the invention to have had the level sensor of '067 provide feedback to the controller of '553 because the water height would have been an indicator of whether the machine would overflow.

Claim 8

'067 teaches:

> A washing machine, including a drum having an axis of rotation in a direction crossing a vertical direction and a water tank surrounding said drum (p. 3 lines 25-30) comprising: a water level detecting unit detecting level of water in said water tank (p. 2 lines 12-29); a water feed unit (5) for feeding water to said water tank (p. 3 lines 33-34); a door (4) opening and closing said opening of said water tank and a control portion operating said washing machine for washing (p. 4 lines 6-9);

It does not teach wherein when said operation for washing is completed, said control portion which causes said water level detecting unit to detect water level in said water tank only for a prescribed time period, and thereafter power supply to said control portion is turned off nor does it teach a lock unit for locking said door.

'213 teaches a control portion which causes said water level detecting unit to detect water level in said water tank only for a prescribed time period, and thereafter power supply to said control portion is turned off as discussed in Claim 1. Additionally '553 teaches a lock unit for locking said door as discussed in Claim 5. At the time of the invention one of ordinary skill in the art would have been motivated to combine these inventions in order to prevent the water from escaping the washing machine. When these two inventions are combined the result is a washing machine that will detect multiple water levels. When the water is at or below the lowest detectable level the door

will unlock the door. After the prescribed time period the control portion will turn off from the teaching of '213 (col. 6 lines 5-10). A prescribed "time period set in accordance with a time period calculated from a minimum flow rate of water fed from said water feed unit and a smallest amount of water detectable by said water level detecting unit" is not required to be calculated by the controller. The time period could be entered manually and therefore not a feature of the apparatus nor does it further limit the apparatus claim. The time period is a feature of the use of the apparatus.

Claim 10

Claim 10 is rejected under the teachings of Claim 8. It would have been obvious to one skilled in the art at the time of the invention that if a door to a washing machine was locked that after the machine was finished washing the door would have to open and unlock in order to remove its contents.

3. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over '067 in view of '213 and '553 as applied to Claim 5 and further in view of Babuin (US Patent 4,696,171 hereafter '171) and Nakamura et al (US Patent 5,000,015 known hereafter as '015).

Claim 6

'067 and '213 teach the features of Claim 5 as discussed above. '067 teaches a drainage unit for draining the water in the tank (p. 3 lines 32-34), and a water leakage

detecting unit (p. 2 lines 12-19, p. 3 lines 12-16) as discussed in Claim 4. '067 does not teach a lock detecting unit nor responding to a pressure switch (or level sensor) that indicates overflow by draining washing liquid from the wash tub. '533 teaches a lock as discussed in Claim 5, but does not teach sensors to determine if the door is locked on not. '015 also teaches a lock and a lock detecting unit (col. 13 lines 60-67). At the time of the invention to one of ordinary skill in the art would have known to combine the drainage unit and leak detecting unit of '067 and '213 with the lock detecting unit of '015 in order to ensure the door was locked properly and not malfunctioning in order to prevent flooding. '171 teaches responding to a pressure switch (or level sensor) that indicates overflow by draining washing liquid from the wash tub (col. 11 lines 56-67). At the time of the invention to one of ordinary skill in the art it would have been obvious to use a leakage detecting unit that detects a high water level that would tell the control portion to open the drain line in combination with a lock and lock detecting unit in order to have prevented overflow.

Claim 7

Claim 7 is rejected as taught in Claim 6 and after further review of '015. '015 teaches that if the door is not able to be locked a sensor detects that the lid is open and a buzzer indicates trouble with the lid (col. 13 lines 60-67). One of ordinary skill in the art at the time of the invention would have known to use the buzzer of '015 with the lock and lock detecting unit discussed in Claim 6 to alert the user of the washing machine that the

door lock was malfunctioning so that the user could take the proper steps to fix the door lock in order to use the washing machine properly.

4. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over '067, '213 and '553 as applied to Claim 8 and further in view of '015.

Claim 11

'067, '213 and '553 teach the limitations of Claim 8. They do not teach a lock detection unit. '015 teaches the lock detecting unit. Combining '067, '213 and '553 with '015 renders obvious for the reasons given above regarding Claims 6-7. When these inventions are combined the result is a washing machine that will detect multiple water levels. When the water is above the first water level the drain will open if the door is not locked, and if water is not detected (because it is below the first level) the control portion will turn off.

Claim 12

Claim 12 is rejected because of the teaching of Claim 11 and additionally because of further review of '015 (col. 13 lines 60-68) as discussed in Claim 7.

Claim 13

Additionally '067 teaches a drainage unit (p.3 lines 32-34) and that after washing is completed and the water is between the first sensor (switch 12) and second sensor the control system tells the drainage system to drain the water tank (p. 5 lines 7-25).

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over '067, '213, '553, '015 and further in view of Kronbetter et al. (US Patent 6,256,823 known hereafter as '823).

Claim 14

Claim 14 is rejected as taught in Claim 13 and in further review '067 which teaches a washing machine with multiple level detectors. It does not teach a relationship between the position of the level detectors and the height of the door. '823 teaches

> "water level is positioned lower than a lowermost plane of said opening of said water tank." (Figure 2, col. 3 lines 50-57)

where there are multiple water levels possible in the water tank. At the time of the invention it would be obvious to one skilled in the art that one would be motivated to prevent water from escaping the washing machine as taught in '823 and therefore the height of the level detectors with respect to the door could be incorporated into the invention discussed in Claim 13.

Response to Arguments

3. Applicant's arguments filed August 29, 2007 have been fully considered but they are not persuasive.

4. Claims 1, 3, and 8

Applicant correctly states that Ohsugi does not teach water level detection is carried out upon completion of the washing cycle, but Totterdell does teach water level detection upon completion of the washing cycle for a period of time (p. 5 lines 7-28). Ohsugi teaches that the washing machine is turned off after a period of time (col. 6 lines 5-10). Therefore the combination of the teachings of Ohsugi and Totterdell teach the claimed invention as previously discussed.

In response to Applicant's piecemeal analysis of the references, it has been held that one cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references. *In re Keller,* 208 USPQ 871 (CCPA 1981).

A prescribed "time period set in accordance with a time period calculated from a minimum flow rate of water fed from said water feed unit and a smallest amount of water detectable by said water level detecting unit" is not required to be calculated by the controller. The time period could be entered manually and therefore not a feature of

feature of the apparatus and it does not require further structure for the apparatus claim. The time period is a feature of the use of the apparatus.

5. Remaining Claims

Applicant states that Dirnberger does not disclosed the feature of claim 5 where a control portion of the leakage detecting unit detects water leakage at the water feed unit. The examiner respectfully disagrees. Dirnberger states that the door is locked when undesirable or dangerous conditions could occur upon opening the door (col. 4 lines 48-64). It is undesirable and potentially dangerous for water to flow onto the floor from the washing machine. One skilled in the art at the time of the invention would have known that the undesirable and potentially dangerous condition occurs in a front loading washing machine when water is leaking from the water detecting unit.

6. Claims 6-7

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, '171 teaches a response to a leak detection to prevent overflow of the washing machine which would

cause a undesirable or dangerous condition. '067 teaches a water leakage detecting unit (p. 2 lines 12-19, p. 3 lines 12-16).

7. Claims 13-14

The examiner would like to point out to the applicant that "a pump out signal is applied to the controller 10 to energize the drain pump" at the end of the wash/rinse cycle (Totterdell p. 5 lines 18-25) regardless of the water level. It has been held that the recitation that an element is "sufficient" to perform a given function is not a positive limitation but only requires the ability to so perform.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joy Watson whose telephone number is 571-270-1267. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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